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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>05 October 2001</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date *attached*.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1.   This office action is responsive to the applicant's remarks received on October 05, 2007.

Claims 1-15 remain pending, and newly added claims 16-21 are pending.

Response to Arguments

2.   Applicant's arguments with respect to amended claims 1-15 and newly added claims 16-

21, filed on October 05, 2007 have been fully considered but they are not persuasive.

A: Applicant's Remarks

Claims 1, 2, 4, 5, 7, 8, 10, 11, 13 and 14 were rejected under 35 U.S.C. § 103, on the

basis of the newly-cited Farrell et al. and Trovinger et al patents (US 6,873,426 and US

6,708,967, respectively). Claims 3, 6, 9, 12 and 15 were rejected on the basis of these two

patents, in view of a tertiary reference, the Jeyachandran et al. patent (US 6,567,176).

Applicants respectfully traverse these rejections for at least the reason that the Farrell patent

does not disclose the claimed subject matter that is attributed to it in the Office Action.

Claim 1 recites a printing system having an on-line client, print server and printer, and

an off-line finishing device. Among other features, the claim recites that the print server includes

sorting means for separating finishing specifics included in a received job ticket into those to be

performed by the printer and those to be performed by the finishing device. The print server also

includes setting means for setting, in the on-line printer, the parameters for the finishing

specifics as separated by the sorting means that are assigned to the on-line printer, and creating

means for creating data for a finishing device job ticket that includes the finishing specifics separated by the sorting means that are assigned to the finishing device. Thus, the finishing specifics in a received job ticket are sorted and assigned among two different devices, namely the printer and the finishing device.

The Office Action asserts that the Ferrell patent discloses the claimed sorting means, with reference to column 4, lines 13-24 and column 4, line 43 to column 5, line 8. It is respectfully submitted that these passage do not disclose a sorting means that sorts the finishing specifics in a received job ticket into two distinct portions, namely those to be performed by an on-line printer and those to be performed by a finishing device. Nor does any other portion of the patent disclose such subject matter.

In other words, the technique disclosed in the Farrell patent looks at the finishing operation as a single entity that is carried out on one machine. It is either performed by the on-site printer (literal finishing), or deferred to a later time when the required equipment becomes available (abstract finishing).

In contrast, the sorting means recited in claim 1 separates "the finishing specifics" in the job ticket into those to be performed by the on-line printer and those to be performed by the finishing device. As such, the finishing specifics are not treated as a single entity. Rather, they are divided among two different pieces of equipment. It is respectfully submitted that the Farrell patent does not disclose dividing the finishing aspects of a print job in such a manner. It employs an "all or nothing" approach, where the finishing operation is carried out on one machine or the other, but not both.

For at least this reason, therefore, it is respectfully submitted that the Ferrell patent does not suggest the subject matter of claim 1 to a person of ordinary skill in the art, whether considered by itself or in combination with the Trovinger patent. Furthermore, it is respectfully submitted that this distinguishing feature is brought out in each of the other independent claims. Accordingly, each of claims 1,4, 7, 10 and 13 is submitted to be patentably distinct from the references. Since all other pending claims depend from one of these patentably distinct independent claims, they are likewise submitted to be patentable over the references.

The foregoing features of the invention are equally applicable to printing systems in which a finishing device, separate from the printer, may be in communication with other devices in the system. In other words, the finishing device need not be completely off-line to implement the concepts of the disclosed invention. New claims 16-20 encompass such an implementation of the invention, and are submitted to be patentable over the references, for the reasons set forth above.

Examiner's Response

Claims 1, 2, 4, 5, 7, 8, 10, 11, 13 and 14 remain pending under 35 U.S.C. § 103, on the basis of the Farrell et al. (US 6,873,426 hereinafter, Farrell '426) and Trovinger et al. (US 6,708,967 hereinafter Trovinger '967). **Claims 3, 6, 9, 12 and 15** remain pending on the basis of these two patents, in view of a Jeyachandran et al. patent (US 6,567,176 hereinafter, Jeyachandran '967). Farrell '426 in combination with Trovinger '967, in view of Jeyachandran '967, does disclose the claimed subject matter.

Regarding claim 1; Farrell '426 discloses a printing system comprising an on-line client,

print server and printer, as well as an off-line finishing device, wherein the print server includes:

first memory means for storing specifications of the on-line printer and of the off-line, finishing

device as well as information regarding options installed thereon (*"Yet another advantage of the*

present invention resides in the easy transition from on-line to off-line finishing." column 3, lines

16-17). See also (*"In the event substitute finishing is selected from decision block 48, the system*

controller 24 will retrieve alternate finishing instructions which are compatible with the

finishing installed element 18, as illustrated in step 50. The alternate finishing instructions can

reside, for example, in the finishing element 18 itself, within a memory in the system 10, or in a

networked or otherwise accessible (to controller 24) source. Once the alternate finishing

instruction is retrieved, the system controller 24 can substitute the alternate finishing instruction

for the entire finishing instruction, as illustrated in step 52. In this case, the print job can be

completed with the alternate finishing instruction, executed by the compatible finishing

equipment 18 on the print system, as illustrated in step 54." column 5, lines 11-22); receiving

means for receiving from the client data pertaining to a job ticket that includes at least finishing

specifics for printing to be executed (*"Referring now to FIG. 2, the controller section 14 is*

illustrated by functional interconnected blocks including an image input control computer 22 for

receiving an electronic representation of an image from the image input source 12. A system

controller 24 extracts the desired finishing instructions for the particular print job from user

interface 26. Typically, users enter preferences such as output media type, orientation, numbers

of copies, collation variables, image output quality, and finishing instructions such as binding

options, hole drilling, excess margin trimming, and the like. Alternately, user preferences could

accompany the job data itself from the image input source 12, for example networked personal

computers may be instructed to supply both job data and user preferences. Artisans will

appreciate that the controllers decoding the user preferences can be embedded within a single

machine, for instance as in an integrated multifunction system; or they can be distributed over a

network where, for instance, the input device is not physically packaged with the printer.

Regardless of source however, the system controller 24 obtains the desired finishing instructions

for the particular print job." column 3, lines 55-67 thru column 4, lines 1-8); sorting means for,

based on the information regarding the specifications and installed options that is stored in the

first memory means, separating the finishing specifics included in the job ticket received by the

receiving means into those to be performed by the on-line printer and those to be performed by

the off-line finishing device (*"However, system controller 24, upon a determination that the*

desired finishing is unavailable, can substitute alternate finishing instructions which are

compatible with available finishing equipment (substitute literal finishing). Additionally, system

controller 24 can also employ slipsheets, folders, colored plastics, or annotations in the margins

of oversized sheets, and the like (substitute abstract finishing). Regardless of the substitute

abstract finishing used, supplying a representation of the desired finishing instructions, either

through code or human-readable text, make later off equipment or off site finishing more likely

to agree with the originally intended finishing instructions." column 4, lines 13-24). See also

(*"Referring now to FIG. 3, exemplary steps of a finish process suitable to practice the present*

invention are shown. As discussed above with reference to FIG. 2, the system controller 24

receives a print job from the input device 12, illustrated in block 40. A threshold question can

then be answered whether to apply literal or abstract finishing to the print job illustrated by

decision block 42. In other words, the present invention envisions a user selecting between either abstract or literal finishing operations at the job onset or during run-time. That is, the job may be prepared with the finishing capabilities existing on the print machine, or with detailed abstract finishing denoting the finishing operation to be later performed. Assuming the job request indicates a preference for literal finishing, for example stapling, the system controller 24 then determines whether the attached finishing element 18 can perform the desired finishing operation, as illustrated by decision block 44. If, to continue the example, stapling is not an option supported by finishing element 18, system controller 24 may then obtain a user preference regarding substitution of the desired finish with an available, literal finish or substituting an abstract finishing operation, as illustrated by block 46. This user preference can take several forms. For example, user preference can be determined from stored or default instructions allowing abstract finishing to be substituted in all cases, or other instructions allowing abstract finishing only when specific literal finishes are unavailable or by querying the user via the user interface. Those skilled in the art will appreciate that providing such a decision to an operator in run time will not significantly inconvenience the operator or slow follow-on print jobs, especially as compared with stopping the print job until user intervention or reprogramming can be accomplished." column 4, lines 13-24 thru column 5, lines 1-8); setting means for setting, in the on-line printer, the parameters for the finishing specifics as separated by the sorting means and assigned to the on-line printer ("*Once the alternate finishing instruction is retrieved, the system controller 24 can substitute the alternate finishing instruction for the entire finishing instruction, as illustrated in step 52. In this case, the print job can be completed with the alternate finishing instruction, executed by the compatible finishing equipment 18 on the print system, as illustrated*

in step 54. " column 5, lines 16-22); and creating means for creating data for a finishing device job ticket that includes the finishing specifics separated by the sorting means and assigned to the off-line finishing device (*"Referring back to decision block 42, in the event that abstract finishing is selected, a processor such as system controller 24 will generate a marker indicative of the desired finishing to be later applied, as illustrated in step 58. The marker generated may take various forms, such as colored plastic slipsheets inserted at compilation boundaries within the print job, or slipsheets inserted as placeholders at locations requiring a later insert. Additionally, the markers can be configured as machine-readable and/or human readable descriptions of the desired finishing printed on the edge of oversized output media or on pages containing job content, for example, by watermark, glyph, barcode and the like. Once these markers have been generated, they are placed relative to the print job, such as at compilation boundaries, at insert places, as a single finish sheet for an entire job, and the like. "* column 5, lines 23-38).

Farrell '426 does not expressly disclose a printing system further comprising an off- line finishing device.

Trovinger '967discloses a finishing device may be offline, receiving both papers and a job ticket from another device (*"FIGS. 6 and 7 provide the best overview of the saddle stitched booklet maker. With an automatic sheet feeder 100, the machine shown represents an off-line booklet maker. An in-line version would take printed sheets from the output paper path of a printer. A stack 103 of duplex printed sheets is placed in an automatic sheet feeder 100. The sheet feeder loads the sheets, sheet-by-sheet, into a paper drive assembly 140 that measures the width of each sheet. A cutter assembly 175 trims each sheet to a pre-determined width according*

to an algorithm. The paper drive assembly 140 next positions each sheet in a fold mechanism 210 that folds the sheets, sheet-by-sheet, along the center line of each sheet. The folded sheet is removed from the fold mechanism 210 by a booklet collection assembly 250 that stacks the sheets in registration on a inverted V-shaped workpiece 259. The stack of sheets is thereafter stapled with a stapler 310 and then ejected by an ejection finger assembly 256 into a booklet unloader 330. The booklet unloader deposits the assembled saddle stitched booklets in the output trays 354. " Trovinger, column 3, lines 25-45). See also (*"The sheets are also evenly registered, one directly beneath the other, in the sheet feeder. The stack 103 can come either from various printers physically remote from the sheet feeder, operating off-line, or from a directly attached printer, in-line. The printers that produce suitable printed sheets are laser printers, inkjet printers, off-set printers, and could include other conventional or digital presses or photocopyers. "* column 3, lines 55-63); and (*"The edge sensors 151, 153, FIG. 9 can also be used to read bar code indicia that are printed on a job ticket that is passed through the booklet maker in front of or before the duplex printed sheets that will processed into the booklet. The job ticket provides job processing instructions in machine readable form to the booklet maker. These can include the number of sheets, the thickness of the sheets or individual sheets, the number and position of staples, the final finished size of the booklet, and other information. The job ticket can originate from any source including the printer that printed the sheets. "* column 7, lines 45-55).

Farrell '426 and Trovinger '967are combinable because they are from same field of endeavor of printer systems (*"The present invention generally relates to finishing printed sheets of paper and, more particularly, to finishing printed sheets of paper into saddle-stitched booklets. "* Trovinger '967 at column 1, lines 6-8).

At the time of the invention, it would have been obvious to a person of ordinary skill in

the art to modify the printer system as taught by Farrell '426 by adding a printing system further

comprising an off- line finishing device as taught by Trovinger '967.

The motivation for doing so would have been because it advantageous to provide an easy

transition from on-line to off-line finishing (*"Yet another advantage of the present invention*

resides in the easy transition from on-line to off-line finishing." Farrell '426 at column 3, lines

16-17).

Therefore, it would have been obvious to combine Farrell '426 with Trovinger '967 to

obtain the invention as specified in claim 1.

Thus, Farrell '426 in combination with Trovinger '967, in view of Jeyachandran '967,

does disclose the claimed subject matter.

Farrell '426 discloses the claimed sorting means(*"Referring back to decision block 42, in*

the event that abstract finishing is selected, a processor such as system controller 24 will

generate a marker indicative of the desired finishing to be later applied, as illustrated in step 58.

The marker generated may take various forms, such as colored plastic slipsheets inserted at

compilation boundaries within the print job, or slipsheets inserted as placeholders at locations

requiring a later insert. Additionally, the markers can be configured as machine-readable and/or

human readable descriptions of the desired finishing printed on the edge of oversized output

media or on pages containing job content, for example, by watermark, glyph, barcode and the

like. Once these markers have been generated, they are placed relative to the print job, such as

at compilation boundaries, at insert places, as a single finish sheet for an entire job, and the

like." column 5, lines 23-38).

Accordingly, **claims 1, 4, 7, 10 and 13** is are not distinct from the references. Since all

other pending claims depend from one of these patentably distinct independent claims, they are

not submitted to be patentable over the references.

New claims 16-20 encompass such an implementation of the invention, and are submitted

to be patentable over the references, for the reasons set forth above.

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2.   **Claims 1, 2, 4, 5, 7, 8, 10, 11, 13, 14, 16-21** are rejected under 35 U.S.C. 103(a) as being

unpatentable over Farrell (US 6,873,426 B1 hereinafter, Farrell '426) in combination with

Trovinger et al. (US 6,708,967 B1 hereinafter, Trovinger '967).

Regarding claim 1; Farrell '426 discloses a printing system comprising an on-line client,

print server and printer, as well as an off-line finishing device, wherein the print server includes:

first memory means for storing specifications of the on-line printer and of the off-line, finishing

device as well as information regarding options installed thereon (*"Yet another advantage of the

present invention resides in the easy transition from on-line to off-line finishing."* column 3, lines

16-17). See also (*"In the event substitute finishing is selected from decision block 48, the system

controller 24 will retrieve alternate finishing instructions which are compatible with the*

finishing installed element 18, as illustrated in step 50. The alternate finishing instructions can reside, for example, in the finishing element 18 itself, within a memory in the system 10, or in a networked or otherwise accessible (to controller 24) source. Once the alternate finishing instruction is retrieved, the system controller 24 can substitute the alternate finishing instruction for the entire finishing instruction, as illustrated in step 52. In this case, the print job can be completed with the alternate finishing instruction, executed by the compatible finishing equipment 18 on the print system, as illustrated in step 54." column 5, lines 11-22); receiving means for receiving from the client data pertaining to a job ticket that includes at least finishing specifics for printing to be executed (*"Referring now to FIG. 2, the controller section 14 is illustrated by functional interconnected blocks including an image input control computer 22 for receiving an electronic representation of an image from the image input source 12. A system controller 24 extracts the desired finishing instructions for the particular print job from user interface 26. Typically, users enter preferences such as output media type, orientation, numbers of copies, collation variables, image output quality, and finishing instructions such as binding options, hole drilling, excess margin trimming, and the like. Alternately, user preferences could accompany the job data itself from the image input source 12, for example networked personal computers may be instructed to supply both job data and user preferences. Artisans will appreciate that the controllers decoding the user preferences can be embedded within a single machine, for instance as in an integrated multifunction system; or they can be distributed over a network where, for instance, the input device is not physically packaged with the printer. Regardless of source however, the system controller 24 obtains the desired finishing instructions for the particular print job."* column 3, lines 55-67 thru column 4, lines 1-8); sorting means for,

based on the information regarding the specifications and installed options that is stored in the

first memory means, separating the finishing specifics included in the job ticket received by the

receiving means into those to be performed by the on-line printer and those to be performed by

the off-line finishing device (*"However, system controller 24, upon a determination that the*

desired finishing is unavailable, can substitute alternate finishing instructions which are

compatible with available finishing equipment (substitute literal finishing). Additionally, system

controller 24 can also employ slipsheets, folders, colored plastics, or annotations in the margins

of oversized sheets, and the like (substitute abstract finishing). Regardless of the substitute

abstract finishing used, supplying a representation of the desired finishing instructions, either

through code or human-readable text, make later off equipment or off site finishing more likely

to agree with the originally intended finishing instructions." column 4, lines 13-24). See also

(*"Referring now to FIG. 3, exemplary steps of a finish process suitable to practice the present*

invention are shown. As discussed above with reference to FIG. 2, the system controller 24

receives a print job from the input device 12, illustrated in block 40. A threshold question can

then be answered whether to apply literal or abstract finishing to the print job illustrated by

decision block 42. In other words, the present invention envisions a user selecting between either

abstract or literal finishing operations at the job onset or during run-time. That is, the job may

be prepared with the finishing capabilities existing on the print machine, or with detailed

abstract finishing denoting the finishing operation to be later performed. Assuming the job

request indicates a preference for literal finishing, for example stapling, the system controller 24

then determines whether the attached finishing element 18 can perform the desired finishing

operation, as illustrated by decision block 44. If, to continue the example, stapling is not an

option supported by finishing element 18, system controller 24 may then obtain a user preference

regarding substitution of the desired finish with an available, literal finish or substituting an

abstract finishing operation, as illustrated by block 46. This user preference can take several

forms. For example, user preference can be determined from stored or default instructions

allowing abstract finishing to be substituted in all cases, or other instructions allowing abstract

finishing only when specific literal finishes are unavailable or by querying the user via the user

interface. Those skilled in the art will appreciate that providing such a decision to an operator in

run time will not significantly inconvenience the operator or slow follow-on print jobs, especially

as compared with stopping the print job until user intervention or reprogramming can be

accomplished." column 4, lines 13-24 thru column 5, lines 1-8); setting means for setting, in the

on-line printer, the parameters for the finishing specifics as separated by the sorting means and

assigned to the on-line printer (*"Once the alternate finishing instruction is retrieved, the system*

controller 24 can substitute the alternate finishing instruction for the entire finishing instruction,

as illustrated in step 52. In this case, the print job can be completed with the alternate finishing

instruction, executed by the compatible finishing equipment 18 on the print system, as illustrated

in step 54." column 5, lines 16-22); and creating means for creating data for a finishing device

job ticket that includes the finishing specifics separated by the sorting means and assigned to the

off-line finishing device (*"Referring back to decision block 42, in the event that abstract*

finishing is selected, a processor such as system controller 24 will generate a marker indicative

of the desired finishing to be later applied, as illustrated in step 58. The marker generated may

take various forms, such as colored plastic slipsheets inserted at compilation boundaries within

the print job, or slipsheets inserted as placeholders at locations requiring a later insert.

Additionally, the markers can be configured as machine-readable and/or human readable descriptions of the desired finishing printed on the edge of oversized output media or on pages containing job content, for example, by watermark, glyph, barcode and the like. Once these markers have been generated, they are placed relative to the print job, such as at compilation boundaries, at insert places, as a single finish sheet for an entire job, and the like." column 5, lines 23-38).

Farrell '426 does not expressly disclose a printing system further comprising an off- line finishing device.

Trovinger '967discloses a finishing device may be offline, receiving both papers and a job ticket from another device (*"FIGS. 6 and 7 provide the best overview of the saddle stitched booklet maker. With an automatic sheet feeder 100, the machine shown represents an off-line booklet maker. An in-line version would take printed sheets from the output paper path of a printer. A stack 103 of duplex printed sheets is placed in an automatic sheet feeder 100. The sheet feeder loads the sheets, sheet-by-sheet, into a paper drive assembly 140 that measures the width of each sheet. A cutter assembly 175 trims each sheet to a pre-determined width according to an algorithm. The paper drive assembly 140 next positions each sheet in a fold mechanism 210 that folds the sheets, sheet-by-sheet, along the center line of each sheet. The folded sheet is removed from the fold mechanism 210 by a booklet collection assembly 250 that stacks the sheets in registration on a inverted V-shaped workpiece 259. The stack of sheets is thereafter stapled with a stapler 310 and then ejected by an ejection finger assembly 256 into a booklet unloader 330. The booklet unloader deposits the assembled saddle stitched booklets in the output trays 354."* Trovinger, column 3, lines 25-45). See also (*"The sheets are also evenly registered,*

one directly beneath the other, in the sheet feeder. The stack 103 can come either from various

printers physically remote from the sheet feeder, operating off-line, or from a directly attached

printer, in-line. The printers that produce suitable printed sheets are laser printers, inkjet

printers, off-set printers, and could include other conventional or digital presses or

photocopyers." column 3, lines 55-63); and (*"The edge sensors 151, 153, FIG. 9 can also be*

used to read bar code indicia that are printed on a job ticket that is passed through the booklet

maker in front of or before the duplex printed sheets that will processed into the booklet. The job

ticket provides job processing instructions in machine readable form to the booklet maker. These

can include the number of sheets, the thickness of the sheets or individual sheets, the number and

position of staples, the final finished size of the booklet, and other information. The job ticket can

originate from any source including the printer that printed the sheets." column 7, lines 45-55).

Farrell '426 and Trovinger '967are combinable because they are from same field of

endeavor of printer systems (*"The present invention generally relates to finishing printed sheets*

of paper and, more particularly, to finishing printed sheets of paper into saddle-stitched

booklets." Trovinger '967 at column 1, lines 6-8).

At the time of the invention, it would have been obvious to a person of ordinary skill in

the art to modify the printer system as taught by Farrell '426 by adding a printing system further

comprising an off- line finishing device as taught by Trovinger '967.

The motivation for doing so would have been because it advantageous to provide an easy

transition from on-line to off-line finishing (*"Yet another advantage of the present invention*

resides in the easy transition from on-line to off-line finishing." Farrell '426 at column 3, lines

16-17).

Therefore, it would have been obvious to combine Farrell '426 with Trovinger '967to

obtain the invention as specified in claim 1.

Regarding claim 2; Farrell '426 discloses a printing system where the print server

further includes transmitting means for transmitting to the on-line printer the data pertaining to

the finishing device job ticket created by the creating means so as to print the finishing device

job ticket (*"Additionally, the markers can be configured as machine-readable and/or human*

readable descriptions of the desired finishing printed on the edge of oversized output media or

on pages containing job content, for example, by watermark, glyph, barcode and the like. Once

these markers have been generated, they are placed relative to the print job, such as at

compilation boundaries, at insert places, as a single finish sheet for an entire job, and the like."

column 5, lines 30-38).

Regarding claim 4; Farrell '426 discloses a print server to be used in a printing system

including an on-line client, print server and printer, as well as an off-line finishing device, the

print server comprising: first memory means for storing specifications of the on-line printer and

of the off-line finishing device as well as information regarding options installed thereon (*"Yet*

another advantage of the present invention resides in the easy transition from on-line to off-line

finishing." column 3, lines 16-17). See also (*"In the event substitute finishing is selected from*

decision block 48, the system controller 24 will retrieve alternate finishing instructions which

are compatible with the finishing installed element 18, as illustrated in step 50. The alternate

finishing instructions can reside, for example, in the finishing element 18 itself, within a memory

in the system 10, or in a networked or otherwise accessible (to controller 24) source. Once the

alternate finishing instruction is retrieved, the system controller 24 can substitute the alternate

finishing instruction for the entire finishing instruction, as illustrated in step 52. In this case, the

print job can be completed with the alternate finishing instruction, executed by the compatible

finishing equipment 18 on the print system, as illustrated in step 54." column 5, lines 11-22);

receiving means for receiving from the client data pertaining to a job ticket that sorting means

for, based on the information regarding the specifications and installed options that is stored in

the first memory means, separating the finishing specifics included in the job ticket received by

the receiving means into those to be performed by the on-line printer and those to be performed

by the off-line finishing device (*"Referring now to FIG. 2, the controller section 14 is illustrated*

by functional interconnected blocks including an image input control computer 22 for receiving

an electronic representation of an image from the image input source 12. A system controller 24

extracts the desired finishing instructions for the particular print job from user interface 26.

Typically, users enter preferences such as output media type, orientation, numbers of copies,

collation variables, image output quality, and finishing instructions such as binding options, hole

drilling, excess margin trimming, and the like. Alternately, user preferences could accompany

the job data itself from the image input source 12, for example networked personal computers

may be instructed to supply both job data and user preferences. Artisans will appreciate that the

controllers decoding the user preferences can be embedded within a single machine, for instance

as in an integrated multifunction system; or they can be distributed over a network where, for

instance, the input device is not physically packaged with the printer. Regardless of source

however, the system controller 24 obtains the desired finishing instructions for the particular

print job." column 3, lines 55-67 thru column 4, lines 1-8) See also (*"However, system*

controller 24, upon a determination that the desired finishing is unavailable, can substitute

alternate finishing instructions which are compatible with available finishing equipment

(substitute literal finishing). Additionally, system controller 24 can also employ slipsheets,

folders, colored plastics, or annotations in the margins of oversized sheets, and the like

(substitute abstract finishing). Regardless of the substitute abstract finishing used, supplying a

representation of the desired finishing instructions, either through code or human-readable text,

make later off equipment or off site finishing more likely to agree with the originally intended

finishing instructions." column 4, lines 13-24). See also ("*Referring now to FIG. 3, exemplary*

steps of a finish process suitable to practice the present invention are shown. As discussed above

with reference to FIG. 2, the system controller 24 receives a print job from the input device 12,

illustrated in block 40. A threshold question can then be answered whether to apply literal or

abstract finishing to the print job illustrated by decision block 42. In other words, the present

invention envisions a user selecting between either abstract or literal finishing operations at the

job onset or during run-time. That is, the job may be prepared with the finishing capabilities

existing on the print machine, or with detailed abstract finishing denoting the finishing operation

to be later performed. Assuming the job request indicates a preference for literal finishing, for

example stapling, the system controller 24 then determines whether the attached finishing

element 18 can perform the desired finishing operation, as illustrated by decision block 44. If, to

continue the example, stapling is not an option supported by finishing element 18, system

controller 24 may then obtain a user preference regarding substitution of the desired finish with

an available, literal finish or substituting an abstract finishing operation, as illustrated by block

46. This user preference can take several forms. For example, user preference can be determined

from stored or default instructions allowing abstract finishing to be substituted in all cases, or

other instructions allowing abstract finishing only when specific literal finishes are unavailable or by querying the user via the user interface. Those skilled in the art will appreciate that providing such a decision to an operator in run time will not significantly inconvenience the operator or slow follow-on print jobs, especially as compared with stopping the print job until user intervention or reprogramming can be accomplished." column 4, lines 13-24 thru column 5, lines 1-8); setting means for setting, in the on-line printer, the parameters for the finishing specifics as separated by the sorting means and assigned to the on-line printer (*"Once the alternate finishing instruction is retrieved, the system controller 24 can substitute the alternate finishing instruction for the entire finishing instruction, as illustrated in step 52. In this case, the print job can be completed with the alternate finishing instruction, executed by the compatible finishing equipment 18 on the print system, as illustrated in step 54."* column 5, lines 16-22); and creating means for creating data for a finishing device job ticket that includes the finishing specifics separated by the sorting means and assigned to the off-line finishing device (*"Referring back to decision block 42, in the event that abstract finishing is selected, a processor such as system controller 24 will generate a marker indicative of the desired finishing to be later applied, as illustrated in step 58. The marker generated may take various forms, such as colored plastic slipsheets inserted at compilation boundaries within the print job, or slipsheets inserted as placeholders at locations requiring a later insert. Additionally, the markers can be configured as machine-readable and/or human readable descriptions of the desired finishing printed on the edge of oversized output media or on pages containing job content, for example, by watermark, glyph, barcode and the like. Once these markers have been generated, they are placed relative to*

the print job, such as at compilation boundaries, at insert places, as a single finish sheet for an

entire job, and the like. " column 5, lines 23-38).

Farrell '426 does not expressly disclose a printing system further comprising an off- line

finishing device.

Trovinger '967discloses a finishing device may be offline, receiving both papers and a

job ticket from another device ("*FIGS. 6 and 7 provide the best overview of the saddle stitched*

booklet maker. With an automatic sheet feeder 100, the machine shown represents an off-line

booklet maker. An in-line version would take printed sheets from the output paper path of a

printer. A stack 103 of duplex printed sheets is placed in an automatic sheet feeder 100. The

sheet feeder loads the sheets, sheet-by-sheet, into a paper drive assembly 140 that measures the

width of each sheet. A cutter assembly 175 trims each sheet to a pre-determined width according

to an algorithm. The paper drive assembly 140 next positions each sheet in a fold mechanism

210 that folds the sheets, sheet-by-sheet, along the center line of each sheet. The folded sheet is

removed from the fold mechanism 210 by a booklet collection assembly 250 that stacks the

sheets in registration on a inverted V-shaped workpiece 259. The stack of sheets is thereafter

stapled with a stapler 310 and then ejected by an ejection finger assembly 256 into a booklet

unloader 330. The booklet unloader deposits the assembled saddle stitched booklets in the output

trays 354. " Trovinger, column 3, lines 25-45). See also (*"The sheets are also evenly registered,*

one directly beneath the other, in the sheet feeder. The stack 103 can come either from various

printers physically remote from the sheet feeder, operating off-line, or from a directly attached

printer, in-line. The printers that produce suitable printed sheets are laser printers, inkjet

printers, off-set printers, and could include other conventional or digital presses or

photocopyers. " column 3, lines 55-63); and (*"The edge sensors 151, 153, FIG. 9 can also be*

used to read bar code indicia that are printed on a job ticket that is passed through the booklet

maker in front of or before the duplex printed sheets that will processed into the booklet. The job

ticket provides job processing instructions in machine readable form to the booklet maker. These

can include the number of sheets, the thickness of the sheets or individual sheets, the number and

position of staples, the final finished size of the booklet, and other information. The job ticket can

originate from any source including the printer that printed the sheets. " column 7, lines 45-55).

Farrell '426 and Trovinger '967are combinable because they are from same field of

endeavor of printer systems (*"The present invention generally relates to finishing printed sheets*

of paper and, more particularly, to finishing printed sheets of paper into saddle-stitched

booklets. " Trovinger '967 at column 1, lines 6-8).

At the time of the invention, it would have been obvious to a person of ordinary skill in

the art to modify the printer system as taught by Farrell '426 by adding a printing system further

comprising an off- line finishing device as taught by Trovinger '967.

The motivation for doing so would have been because it advantageous to provide an easy

transition from on-line to off-line finishing (*"Yet another advantage of the present invention*

resides in the easy transition from on-line to off-line finishing. " Farrell '426 at column 3, lines

16-17).

Therefore, it would have been obvious to combine Farrell '426 with Trovinger '967to

obtain the invention as specified in claim 4.

Regarding claim 5; Farrell '426 discloses a print server as claimed in claim 4, further

comprising transmitting means for transmitting to the on-line printer the data pertaining to the

finishing device job ticket created by the creating means so as to print the finishing device job

ticket (*"Additionally, the markers can be configured as machine-readable and/or human*

readable descriptions of the desired finishing printed on the edge of oversized output media or

on pages containing job content, for example, by watermark, glyph, barcode and the like. Once

these markers have been generated, they are placed relative to the print job, such as at

compilation boundaries, at insert places, as a single finish sheet for an entire job, and the like."

column 5, lines 30-38).

Regarding claim 7; Farrell '426 discloses a computer-readable medium containing a

computer program to be used in a printing system which includes an on-line client and printer as

well as an off-line finishing device, and which executes a print job based on a job ticket

including at least finishing specifics for printing to be executed, the computer program causing a

computer to execute processing comprising the steps of: receiving the job ticket from the client

(*"Referring now to FIG. 2, the controller section 14 is illustrated by functional interconnected*

blocks including an image input control computer 22 for receiving an electronic representation

of an image from the image input source 12. A system controller 24 extracts the desired finishing

instructions for the particular print job from user interface 26. Typically, users enter preferences

such as output media type, orientation, numbers of copies, collation variables, image output

quality, and finishing instructions such as binding options, hole drilling, excess margin

trimming, and the like. Alternately, user preferences could accompany the job data itself from

the image input source 12, for example networked personal computers may be instructed to

supply both job data and user preferences. Artisans will appreciate that the controllers decoding

the user preferences can be embedded within a single machine, for instance as in an integrated

multifunction system; or they can be distributed over a network where, for instance, the input device is not physically packaged with the printer. Regardless of source however, the system controller 24 obtains the desired finishing instructions for the particular print job." column 3, lines 55-67 thru column 4, lines 1-8); separating the finishing specifics included in the received job ticket into those to be performed by the on-line printer and those to be performed by the off-line finishing device, based on information regarding specifications and installed options of the on-line printer and finishing device that is stored in first memory means (*"However, system controller 24, upon a determination that the desired finishing is unavailable, can substitute alternate finishing instructions which are compatible with available finishing equipment (substitute literal finishing). Additionally, system controller 24 can also employ slipsheets, folders, colored plastics, or annotations in the margins of oversized sheets, and the like (substitute abstract finishing). Regardless of the substitute abstract finishing used, supplying a representation of the desired finishing instructions, either through code or human-readable text, make later off equipment or off site finishing more likely to agree with the originally intended finishing instructions."* column 4, lines 13-24). See also (*"Referring now to FIG. 3, exemplary steps of a finish process suitable to practice the present invention are shown. As discussed above with reference to FIG. 2, the system controller 24 receives a print job from the input device 12, illustrated in block 40. A threshold question can then be answered whether to apply literal or abstract finishing to the print job illustrated by decision block 42. In other words, the present invention envisions a user selecting between either abstract or literal finishing operations at the job onset or during run-time. That is, the job may be prepared with the finishing capabilities existing on the print machine, or with detailed abstract finishing denoting the finishing operation*

to be later performed. Assuming the job request indicates a preference for literal finishing, for example stapling, the system controller 24 then determines whether the attached finishing element 18 can perform the desired finishing operation, as illustrated by decision block 44. If, to continue the example, stapling is not an option supported by finishing element 18, system controller 24 may then obtain a user preference regarding substitution of the desired finish with an available, literal finish or substituting an abstract finishing operation, as illustrated by block 46. This user preference can take several forms. For example, user preference can be determined from stored or default instructions allowing abstract finishing to be substituted in all cases, or other instructions allowing abstract finishing only when specific literal finishes are unavailable or by querying the user via the user interface. Those skilled in the art will appreciate that providing such a decision to an operator in run time will not significantly inconvenience the operator or slow follow-on print jobs, especially as compared with stopping the print job until user intervention or reprogramming can be accomplished." column 4, lines 13-24 thru column 5, lines 1-8); setting, in the on-line printer, the parameters for the finishing specifics as separated and assigned to the on-line printer (*"Once the alternate finishing instruction is retrieved, the system controller 24 can substitute the alternate finishing instruction for the entire finishing instruction, as illustrated in step 52. In this case, the print job can be completed with the alternate finishing instruction, executed by the compatible finishing equipment 18 on the print system, as illustrated in step 54."* column 5, lines 16-22); and creating data for a finishing device job ticket that includes the finishing specifics separated and assigned to the off-line finishing device (*"Referring back to decision block 42, in the event that abstract finishing is selected, a processor such as system controller 24 will generate a marker indicative of the desired finishing*

to be later applied, as illustrated in step 58. The marker generated may take various forms, such

as colored plastic slipsheets inserted at compilation boundaries within the print job, or slipsheets

inserted as placeholders at locations requiring a later insert. Additionally, the markers can be

configured as machine-readable and/or human readable descriptions of the desired finishing

printed on the edge of oversized output media or on pages containing job content, for example,

by watermark, glyph, barcode and the like. Once these markers have been generated, they are

placed relative to the print job, such as at compilation boundaries, at insert places, as a single

finish sheet for an entire job, and the like. " column 5, lines 23-38).

Farrell '426 does not expressly disclose a printing system further comprising an off- line

finishing device.

Trovinger '967 discloses a finishing device may be offline, receiving both papers and a

job ticket from another device ("*FIGS. 6 and 7 provide the best overview of the saddle stitched*

booklet maker. With an automatic sheet feeder 100, the machine shown represents an off-line

booklet maker. An in-line version would take printed sheets from the output paper path of a

printer. A stack 103 of duplex printed sheets is placed in an automatic sheet feeder 100. The

sheet feeder loads the sheets, sheet-by-sheet, into a paper drive assembly 140 that measures the

width of each sheet. A cutter assembly 175 trims each sheet to a pre-determined width according

to an algorithm. The paper drive assembly 140 next positions each sheet in a fold mechanism

210 that folds the sheets, sheet-by-sheet, along the center line of each sheet. The folded sheet is

removed from the fold mechanism 210 by a booklet collection assembly 250 that stacks the

sheets in registration on a inverted V-shaped workpiece 259. The stack of sheets is thereafter

stapled with a stapler 310 and then ejected by an ejection finger assembly 256 into a booklet

unloader 330. The booklet unloader deposits the assembled saddle stitched booklets in the output trays 354." Trovinger, column 3, lines 25-45). See also (*"The sheets are also evenly registered, one directly beneath the other, in the sheet feeder. The stack 103 can come either from various printers physically remote from the sheet feeder, operating off-line, or from a directly attached printer, in-line. The printers that produce suitable printed sheets are laser printers, inkjet printers, off-set printers, and could include other conventional or digital presses or photocopyers.*" column 3, lines 55-63); and (*"The edge sensors 151, 153, FIG. 9 can also be used to read bar code indicia that are printed on a job ticket that is passed through the booklet maker in front of or before the duplex printed sheets that will processed into the booklet. The job ticket provides job processing instructions in machine readable form to the booklet maker. These can include the number of sheets, the thickness of the sheets or individual sheets, the number and position of staples, the final finished size of the booklet, and other information. The job ticket can originate from any source including the printer that printed the sheets.*" column 7, lines 45-55).

Farrell '426 and Trovinger '967are combinable because they are from same field of endeavor of printer systems (*"The present invention generally relates to finishing printed sheets of paper and, more particularly, to finishing printed sheets of paper into saddle-stitched booklets.*" Trovinger '967 at column 1, lines 6-8).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the printer system as taught by Farrell '426 by adding a printing system further comprising an off- line finishing device as taught by Trovinger '967.

The motivation for doing so would have been because it advantageous to provide an easy transition from on-line to off-line finishing (*"Yet another advantage of the present invention*

resides in the easy transition from on-line to off-line finishing." Farrell '426 at column 3, lines

16-17).

Therefore, it would have been obvious to combine Farrell '426 with Trovinger '967to

obtain the invention as specified in claim 7.

Regarding claim 8; Farrell '426 discloses a computer-readable medium containing a

computer program as claimed in claim 7, the processing further comprising a step of transmitting

to the on-line printer the created data pertaining to the finishing device job ticket so as to print

the finishing device job ticket (*"Additionally, the markers can be configured as machine-

readable and/or human readable descriptions of the desired finishing printed on the edge of

oversized output media or on pages containing job content, for example, by watermark, glyph,

barcode and the like. Once these markers have been generated, they are placed relative to the

print job, such as at compilation boundaries, at insert places, as a single finish sheet for an

entire job, and the like."* column 5, lines 30-38).

Regarding claim 10; A printing system comprising an on-line client, print server and

printer, and an off-line finishing device, wherein the print server includes: a memory for storing

specifications of the on-line printer and the off-line finishing device (*"Yet another advantage of

the present invention resides in the easy transition from on-line to off-line finishing."* column 3,

lines 16-17). See also (*"In the event substitute finishing is selected from decision block 48, the

system controller 24 will retrieve alternate finishing instructions which are compatible with the

finishing installed element 18, as illustrated in step 50. The alternate finishing instructions can

reside, for example, in the finishing element 18 itself, within a memory in the system 10, or in a

networked or otherwise accessible (to controller 24) source. Once the alternate finishing*

instruction is retrieved, the system controller 24 can substitute the alternate finishing instruction

for the entire finishing instruction, as illustrated in step 52. In this case, the print job can be

completed with the alternate finishing instruction, executed by the compatible finishing

equipment 18 on the print system, as illustrated in step 54." column 5, lines 11-22); and a

processor that separates finishing specifics included in a received job ticket the on-line printer

with the parameters for the separated finishing specifics to be performed by the on-line printer,

and generates a job ticket that includes the separated finishing specifics to be performed by the

off-line finishing device (*"However, system controller 24, upon a determination that the desired*

finishing is unavailable, can substitute alternate finishing instructions which are compatible with

available finishing equipment (substitute literal finishing). Additionally, system controller 24 can

also employ slipsheets, folders, colored plastics, or annotations in the margins of oversized

sheets, and the like (substitute abstract finishing). Regardless of the substitute abstract finishing

used, supplying a representation of the desired finishing instructions, either through code or

human-readable text, make later off equipment or off site finishing more likely to agree with the

originally intended finishing instructions." column 4, lines 13-24). See also (*"Referring now to*

FIG. 3, exemplary steps of a finish process suitable to practice the present invention are shown.

As discussed above with reference to FIG. 2, the system controller 24 receives a print job from

the input device 12, illustrated in block 40. A threshold question can then be answered whether

to apply literal or abstract finishing to the print job illustrated by decision block 42. In other

words, the present invention envisions a user selecting between either abstract or literal

finishing operations at the job onset or during run-time. That is, the job may be prepared with

the finishing capabilities existing on the print machine, or with detailed abstract finishing

denoting the finishing operation to be later performed. Assuming the job request indicates a

preference for literal finishing, for example stapling, the system controller 24 then determines

whether the attached finishing element 18 can perform the desired finishing operation, as

illustrated by decision block 44. If, to continue the example, stapling is not an option supported

by finishing element 18, system controller 24 may then obtain a user preference regarding

substitution of the desired finish with an available, literal finish or substituting an abstract

finishing operation, as illustrated by block 46. This user preference can take several forms. For

example, user preference can be determined from stored or default instructions allowing

abstract finishing to be substituted in all cases, or other instructions allowing abstract finishing

only when specific literal finishes are unavailable or by querying the user via the user interface.

Those skilled in the art will appreciate that providing such a decision to an operator in run time

will not significantly inconvenience the operator or slow follow-on print jobs, especially as

compared with stopping the print job until user intervention or reprogramming can be

accomplished." column 4, lines 13-24 thru column 5, lines 1-8).

Farrell '426 does not expressly disclose a printing system further comprising an off- line

finishing device.

Trovinger '967discloses a finishing device may be offline, receiving both papers and a

job ticket from another device ("*FIGS. 6 and 7 provide the best overview of the saddle stitched*

booklet maker. With an automatic sheet feeder 100, the machine shown represents an off-line

booklet maker. An in-line version would take printed sheets from the output paper path of a

printer. A stack 103 of duplex printed sheets is placed in an automatic sheet feeder 100. The

sheet feeder loads the sheets, sheet-by-sheet, into a paper drive assembly 140 that measures the

width of each sheet. A cutter assembly 175 trims each sheet to a pre-determined width according

to an algorithm. The paper drive assembly 140 next positions each sheet in a fold mechanism

210 that folds the sheets, sheet-by-sheet, along the center line of each sheet. The folded sheet is

removed from the fold mechanism 210 by a booklet collection assembly 250 that stacks the

sheets in registration on a inverted V-shaped workpiece 259. The stack of sheets is thereafter

stapled with a stapler 310 and then ejected by an ejection finger assembly 256 into a booklet

unloader 330. The booklet unloader deposits the assembled saddle stitched booklets in the output

trays 354." Trovinger, column 3, lines 25-45). See also (*"The sheets are also evenly registered,*

one directly beneath the other, in the sheet feeder. The stack 103 can come either from various

printers physically remote from the sheet feeder, operating off-line, or from a directly attached

printer, in-line. The printers that produce suitable printed sheets are laser printers, inkjet

printers, off-set printers, and could include other conventional or digital presses or

photocopyers." column 3, lines 55-63); and (*"The edge sensors 151, 153, FIG. 9 can also be*

used to read bar code indicia that are printed on a job ticket that is passed through the booklet

maker in front of or before the duplex printed sheets that will processed into the booklet. The job

ticket provides job processing instructions in machine readable form to the booklet maker. These

can include the number of sheets, the thickness of the sheets or individual sheets, the number and

position of staples, the final finished size of the booklet, and other information. The job ticket can

originate from any source including the printer that printed the sheets." column 7, lines 45-55).

Farrell '426 and Trovinger '967are combinable because they are from same field of

endeavor of printer systems (*"The present invention generally relates to finishing printed sheets*

of paper and, more particularly, to finishing printed sheets of paper into saddle-stitched booklets." Trovinger '967 at column 1, lines 6-8).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the printer system as taught by Farrell '426 by adding a printing system further comprising an off-line finishing device as taught by Trovinger '967.

The motivation for doing so would have been because it advantageous to provide an easy transition from on-line to off-line finishing (*"Yet another advantage of the present invention resides in the easy transition from on-line to off-line finishing."* Farrell '426 at column 3, lines 16-17).

Therefore, it would have been obvious to combine Farrell '426 with Trovinger '967to obtain the invention as specified in claim 10.

Regarding claim 11; Farrell '426 discloses a printing system as claimed in claim 10, wherein the print server further transmits to the on-line printer the data pertaining to the job ticket generated by the processor to print the finishing device job ticket (*"Additionally, the markers can be configured as machine-readable and/or human readable descriptions of the desired finishing printed on the edge of oversized output media or on pages containing job content, for example, by watermark, glyph, barcode and the like. Once these markers have been generated, they are placed relative to the print job, such as at compilation boundaries, at insert places, as a single finish sheet for an entire job, and the like."* column 5, lines 30-38).

Regarding claim 13; Farrell '426 discloses a print server to be used in a printing system including an on-line client, print server and printer, and an off-line finishing device, the print server comprising: a memory for storing specifications of the on-line printer and the off-line

finishing device (*"Yet another advantage of the present invention resides in the easy transition from on-line to off-line finishing."* column 3, lines 16-17). See also (*"In the event substitute finishing is selected from decision block 48, the system controller 24 will retrieve alternate finishing instructions which are compatible with the finishing installed element 18, as illustrated in step 50. The alternate finishing instructions can reside, for example, in the finishing element 18 itself, within a memory in the system 10, or in a networked or otherwise accessible (to controller 24) source. Once the alternate finishing instruction is retrieved, the system controller 24 can substitute the alternate finishing instruction for the entire finishing instruction, as illustrated in step 52. In this case, the print job can be completed with the alternate finishing instruction, executed by the compatible finishing equipment 18 on the print system, as illustrated in step 54."* column 5, lines 11-22); a processor that separates finishing specifics included in a received job ticket into those to be performed by the on-line printer and those to be performed by the off-line finishing device, based on the specifications stored in said memory, provides the on-line printer with the parameters for the separated finishing specifics to be performed by the on-line printer, and generates a job ticket that includes the separated finishing specifics to be performed by the off-line finishing device (*"However, system controller 24, upon a determination that the desired finishing is unavailable, can substitute alternate finishing instructions which are compatible with available finishing equipment (substitute literal finishing). Additionally, system controller 24 can also employ slipsheets, folders, colored plastics, or annotations in the margins of oversized sheets, and the like (substitute abstract finishing). Regardless of the substitute abstract finishing used, supplying a representation of the desired finishing instructions, either through code or human-readable text, make later off*

equipment or off site finishing more likely to agree with the originally intended finishing

instructions." column 4, lines 13-24). See also (*"Referring now to FIG. 3, exemplary steps of a*

finish process suitable to practice the present invention are shown. As discussed above with

reference to FIG. 2, the system controller 24 receives a print job from the input device 12,

illustrated in block 40. A threshold question can then be answered whether to apply literal or

abstract finishing to the print job illustrated by decision block 42. In other words, the present

invention envisions a user selecting between either abstract or literal finishing operations at the

job onset or during run-time. That is, the job may be prepared with the finishing capabilities

·existing on the print machine, or with detailed abstract finishing denoting the finishing operation

to be later performed. Assuming the job request indicates a preference for literal finishing, for

example stapling, the system controller 24 then determines whether the attached finishing

element 18 can perform the desired finishing operation, as illustrated by decision block 44. If, to

continue the example, stapling is not an option supported by finishing element 18, system

controller 24 may then obtain a user preference regarding substitution of the desired finish with

an available, literal finish or substituting an abstract finishing operation, as illustrated by block

46. This user preference can take several forms. For example, user preference can be determined

from stored or default instructions allowing abstract finishing to be substituted in all cases, or

other instructions allowing abstract finishing only when specific literal finishes are unavailable

or by querying the user via the user interface. Those skilled in the art will appreciate that

providing such a decision to an operator in run time will not significantly inconvenience the

operator or slow follow-on print jobs, especially as compared with stopping the print job until

user intervention or reprogramming can be accomplished." column 4, lines 13-24 thru column

5, lines 1-8).

Farrell '426 does not expressly disclose a printing system further comprising an off- line

finishing device.

Trovinger '967discloses a finishing device may be offline, receiving both papers and a

job ticket from another device (*"FIGS. 6 and 7 provide the best overview of the saddle stitched*

booklet maker. With an automatic sheet feeder 100, the machine shown represents an off-line

booklet maker. An in-line version would take printed sheets from the output paper path of a

printer. A stack 103 of duplex printed sheets is placed in an automatic sheet feeder 100. The

sheet feeder loads the sheets, sheet-by-sheet, into a paper drive assembly 140 that measures the

width of each sheet. A cutter assembly 175 trims each sheet to a pre-determined width according

to an algorithm. The paper drive assembly 140 next positions each sheet in a fold mechanism

210 that folds the sheets, sheet-by-sheet, along the center line of each sheet. The folded sheet is

removed from the fold mechanism 210 by a booklet collection assembly 250 that stacks the

sheets in registration on a inverted V-shaped workpiece 259. The stack of sheets is thereafter

stapled with a stapler 310 and then ejected by an ejection finger assembly 256 into a booklet

unloader 330. The booklet unloader deposits the assembled saddle stitched booklets in the output

trays 354." Trovinger, column 3, lines 25-45). See also (*"The sheets are also evenly registered,*

one directly beneath the other, in the sheet feeder. The stack 103 can come either from various

printers physically remote from the sheet feeder, operating off-line, or from a directly attached

printer, in-line. The printers that produce suitable printed sheets are laser printers, inkjet

printers, off-set printers, and could include other conventional or digital presses or

photocopyers." column 3, lines 55-63); and (*"The edge sensors 151, 153, FIG. 9 can also be used to read bar code indicia that are printed on a job ticket that is passed through the booklet maker in front of or before the duplex printed sheets that will processed into the booklet. The job ticket provides job processing instructions in machine readable form to the booklet maker. These can include the number of sheets, the thickness of the sheets or individual sheets, the number and position of staples, the final finished size of the booklet, and other information. The job ticket can originate from any source including the printer that printed the sheets."* column 7, lines 45-55).

Farrell '426 and Trovinger '967are combinable because they are from same field of endeavor of printer systems (*"The present invention generally relates to finishing printed sheets of paper and, more particularly, to finishing printed sheets of paper into saddle-stitched booklets."* Trovinger '967 at column 1, lines 6-8).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the printer system as taught by Farrell '426 by adding a printing system further comprising an off-line finishing device as taught by Trovinger '967.

The motivation for doing so would have been because it advantageous to provide an easy transition from on-line to off-line finishing (*"Yet another advantage of the present invention resides in the easy transition from on-line to off-line finishing."* Farrell '426 at column 3, lines 16-17).

Therefore, it would have been obvious to combine Farrell '426 with Trovinger '967to obtain the invention as specified in claim 13.

Regarding claim 14; Farrell '426 discloses a print server as claimed in claim 13, wherein the print server further transmits to the on-line printer the data pertaining to the job

ticket generated by the processor to print the finishing device job ticket (*"Additionally, the markers can be configured as machine-readable and/or human readable descriptions of the desired finishing printed on the edge of oversized output media or on pages containing job content, for example, by watermark, glyph, barcode and the like. Once these markers have been generated, they are placed relative to the print job, such as at compilation boundaries, at insert places, as a single finish sheet for an entire job, and the like."* column 5, lines 30-38).

Regarding claim 16; Farrell '426 discloses a print server to be used in a printing system including a client, the print server, a printer on which at least one finishing option is installed, and a finishing device that is separately provided from the printer, comprising: a first memory section that stores information on the specifications of the printer, the finisher, and the at least one finishing option installed on the printer (*"Yet another advantage of the present invention resides in the easy transition from on-line to off-line finishing."* column 3, lines 16-17). See also (*"In the event substitute finishing is selected from decision block 48, the system controller 24 will retrieve alternate finishing instructions which are compatible with the finishing installed element 18, as illustrated in step 50. The alternate finishing instructions can reside, for example, in the finishing element 18 itself, within a memory in the system 10, or in a networked or otherwise accessible (to controller 24) source. Once the alternate finishing instruction is retrieved, the system controller 24 can substitute the alternate finishing instruction for the entire finishing instruction, as illustrated in step 52. In this case, the print job can be completed with the alternate finishing instruction, executed by the compatible finishing equipment 18 on the print system, as illustrated in step 54."* column 5, lines 11-22); a receiving section that receives from the client data pertaining to a job ticket that includes at least finishing specifics for printing

to be executed (*"Referring now to FIG. 2, the controller section 14 is illustrated by functional interconnected blocks including an image input control computer 22 for receiving an electronic representation of an image from the image input source 12. A system controller 24 extracts the desired finishing instructions for the particular print job from user interface 26. Typically, users enter preferences such as output media type, orientation, numbers of copies, collation variables, image output quality, and finishing instructions such as binding options, hole drilling, excess margin trimming, and the like. Alternately, user preferences could accompany the job data itself from the image input source 12, for example networked personal computers may be instructed to supply both job data and user preferences. Artisans will appreciate that the controllers decoding the user preferences can be embedded within a single machine, for instance as in an integrated multifunction system; or they can be distributed over a network where, for instance, the input device is not physically packaged with the printer. Regardless of source however, the system controller 24 obtains the desired finishing instructions for the particular print job."* column 3, lines 55-67 thru column 4, lines 1-8); and a control section that separates, based on the information on the specifications of the printer, the finishing device, and the at least one finishing option installed on the printer that is stored in the first memory section, the finishing specifics included in the job ticket received by the receiving section into a first group of finishing specifics to be performed by the at least one finishing option installed on the printer and a second group of finishing specifics to be performed by the finishing device separately provided from the printer (*"However, system controller 24, upon a determination that the desired finishing is unavailable, can substitute alternate finishing instructions which are compatible with available finishing equipment (substitute literal finishing). Additionally, system controller 24 can also*

employ slipsheets, folders, colored plastics, or annotations in the margins of oversized sheets,

and the like (substitute abstract finishing). Regardless of the substitute abstract finishing used,

supplying a representation of the desired finishing instructions, either through code or human-

readable text, make later off equipment or off site finishing more likely to agree with the

originally intended finishing instructions." column 4, lines 13-24). See also (*"Referring now to*

FIG. 3, exemplary steps of a finish process suitable to practice the present invention are shown.

As discussed above with reference to FIG. 2, the system controller 24 receives a print job from

the input device 12, illustrated in block 40. A threshold question can then be answered whether

to apply literal or abstract finishing to the print job illustrated by decision block 42. In other

words, the present invention envisions a user selecting between either abstract or literal

finishing operations at the job onset or during run-time. That is, the job may be prepared with

the finishing capabilities existing on the print machine, or with detailed abstract finishing

denoting the finishing operation to be later performed. Assuming the job request indicates a

preference for literal finishing, for example stapling, the system controller 24 then determines

whether the attached finishing element 18 can perform the desired finishing operation, as

illustrated by decision block 44. If, to continue the example, stapling is not an option supported

by finishing element 18, system controller 24 may then obtain a user preference regarding

substitution of the desired finish with an available, literal finish or substituting an abstract

finishing operation, as illustrated by block 46. This user preference can take several forms. For

example, user preference can be determined from stored or default instructions allowing

abstract finishing to be substituted in all cases, or other instructions allowing abstract finishing

only when specific literal finishes are unavailable or by querying the user via the user interface.

Those skilled in the art will appreciate that providing such a decision to an operator in run time

will not significantly inconvenience the operator or slow follow-on print jobs, especially as

compared with stopping the print job until user intervention or reprogramming can be

accomplished." column 4, lines 13-24 thru column 5, lines 1-8).

Farrell '426 does not expressly disclose a printing system further comprising an off- line

finishing device.

Trovinger '967discloses a finishing device may be offline, receiving both papers and a

job ticket from another device (*"FIGS. 6 and 7 provide the best overview of the saddle stitched*

booklet maker. With an automatic sheet feeder 100, the machine shown represents an off-line

booklet maker. An in-line version would take printed sheets from the output paper path of a

printer. A stack 103 of duplex printed sheets is placed in an automatic sheet feeder 100. The

sheet feeder loads the sheets, sheet-by-sheet, into a paper drive assembly 140 that measures the

width of each sheet. A cutter assembly 175 trims each sheet to a pre-determined width according

to an algorithm. The paper drive assembly 140 next positions each sheet in a fold mechanism

210 that folds the sheets, sheet-by-sheet, along the center line of each sheet. The folded sheet is

removed from the fold mechanism 210 by a booklet collection assembly 250 that stacks the

sheets in registration on a inverted V-shaped workpiece 259. The stack of sheets is thereafter

stapled with a stapler 310 and then ejected by an ejection finger assembly 256 into a booklet

unloader 330. The booklet unloader deposits the assembled saddle stitched booklets in the output

trays 354." Trovinger, column 3, lines 25-45). See also (*"The sheets are also evenly registered,*

one directly beneath the other, in the sheet feeder. The stack 103 can come either from various

printers physically remote from the sheet feeder, operating off-line, or from a directly attached

printer, in-line. The printers that produce suitable printed sheets are laser printers, inkjet printers, off-set printers, and could include other conventional or digital presses or photocopyers." column 3, lines 55-63); and ("*The edge sensors 151, 153, FIG. 9 can also be used to read bar code indicia that are printed on a job ticket that is passed through the booklet maker in front of or before the duplex printed sheets that will processed into the booklet. The job ticket provides job processing instructions in machine readable form to the booklet maker. These can include the number of sheets, the thickness of the sheets or individual sheets, the number and position of staples, the final finished size of the booklet, and other information. The job ticket can originate from any source including the printer that printed the sheets.*" column 7, lines 45-55).

Farrell '426 and Trovinger '967are combinable because they are from same field of endeavor of printer systems ("*The present invention generally relates to finishing printed sheets of paper and, more particularly, to finishing printed sheets of paper into saddle-stitched booklets.*" Trovinger '967 at column 1, lines 6-8).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the printer system as taught by Farrell '426 by adding a printing system further comprising an off- line finishing device as taught by Trovinger '967.

The motivation for doing so would have been because it advantageous to provide an easy transition from on-line to off-line finishing ("*Yet another advantage of the present invention resides in the easy transition from on-line to off-line finishing.*" Farrell '426 at column 3, lines 16-17).

Therefore, it would have been obvious to combine Farrell '426 with Trovinger '967to obtain the invention as specified in claim 13.

Regarding claim 17; Farrell '426 discloses a transmitting section that transmits information on the first group of specifics to the printer (*"Additionally, the markers can be configured as machine-readable and/or human readable descriptions of the desired finishing printed on the edge of oversized output media or on pages containing job content, for example, by watermark, glyph, barcode and the like. Once these markers have been generated, they are placed relative to the print job, such as at compilation boundaries, at insert places, as a single finish sheet for an entire job, and the like."* column 5, lines 30-38).

Regarding claim 18; Farrell '426 discloses where the information on second group of the specifics is also sent to the printer (*"Once the alternate finishing instruction is retrieved, the system controller 24 can substitute the alternate finishing instruction for the entire finishing instruction, as illustrated in step 52. In this case, the print job can be completed with the alternate finishing instruction, executed by the compatible finishing equipment 18 on the print system, as illustrated in step 54."* column 5, lines 16-22);

Regarding claim 19; Farrell '426 discloses where the information on the second group of specifics is sent to the printer in a form of data to be printed by the printer (*"Once the alternate finishing instruction is retrieved, the system controller 24 can substitute the alternate finishing instruction for the entire finishing instruction, as illustrated in step 52. In this case, the print job can be completed with the alternate finishing instruction, executed by the compatible finishing equipment 18 on the print system, as illustrated in step 54."* column 5, lines 16-22);

Regarding claim 20; Farrell '426 discloses where the form of data complies with a page description language (*"Once the alternate finishing instruction is retrieved, the system controller 24 can substitute the alternate finishing instruction for the entire finishing instruction, as*

illustrated in step 52. In this case, the print job can be completed with the alternate finishing instruction, executed by the compatible finishing equipment 18 on the print system, as illustrated in step 54. " column 5, lines 16-22);

Regarding claim 21; Farrell '426 discloses where the finishing device is an off-line finishing device that is disconnected from the client, the print server, and the printer (*"Once the alternate finishing instruction is retrieved, the system controller 24 can substitute the alternate finishing instruction for the entire finishing instruction, as illustrated in step 52. In this case, the print job can be completed with the alternate finishing instruction, executed by the compatible finishing equipment 18 on the print system, as illustrated in step 54. "* column 5, lines 16-22). See also (*"Yet another advantage of the present invention resides in the easy transition from on-line to off-line finishing. "* column 3, lines 16-17).

4.   **Claim 3, 6, 9, 12 & 15** are rejected under 35 U.S.C. 103(a) as being unpatentable over Farrell '426 in combination with Trovinger '967 as applied to claim 1 above, and further in view of Jeyachandran et al. (US 6,567,176 B1 hereinafter, Jeyachandran '176).

Regarding claim 3; Farrell '426 discloses a printing system as claimed in claim 2, further comprising an on-line scanner, and wherein the print server further includes: second memory means for storing job information and user information included in the job ticket received by the receiving means (*"Referring now to FIG. 2, the controller section 14 is illustrated by functional interconnected blocks including an image input control computer 22 for receiving an electronic representation of an image from the image input source 12. A system controller 24 extracts the desired finishing instructions for the particular print job from user*

interface 26. Typically, users enter preferences such as output media type, orientation, numbers

of copies, collation variables, image output quality, and finishing instructions such as binding

options, hole drilling, excess margin trimming, and the like. Alternately, user preferences could

accompany the job data itself from the image input source 12, for example networked personal

computers may be instructed to supply both job data and user preferences. Artisans will

appreciate that the controllers decoding the user preferences can be embedded within a single

machine, for instance as in an integrated multifunction system; or they can be distributed over a

network where, for instance, the input device is not physically packaged with the printer.

Regardless of source however, the system controller 24 obtains the desired finishing instructions

for the particular print job." column 3, lines 55-67 thru column 4, lines 1-7, See also Fig. 2);

reading means for reading the job information from the data obtained by reading via the scanner

the finishing device job ticket printed by the on-line printer (*"The edge sensors 151, 153, FIG. 9*

can also be used to read bar code indicia that are printed on a job ticket that is passed through

the booklet maker in front of or before the duplex printed sheets that will processed into the

booklet. The job ticket provides job processing instructions in machine readable form to the

booklet maker. These can include the number of sheets, the thickness of the sheets or individual

sheets, the number and position of staples, the final finished size of the booklet, and other

information. The job ticket can originate from any source including the printer that printed the

sheets." column 7, lines 45-55).

Farrell '426 and Trovinger '967 does not expressly disclose notifying means for calling

the user information stored in the second memory means based on the job information read by

the reading means and notifying the client of job completion based on the user information.

Jeyachandran '176 discloses notifying means for calling the user information stored in the second memory means based on the job information read by the reading means and notifying the client of job completion based on the user information (*"Since, at step S157, the printer 104 can not execute the job, program control moves to step S160. Then, as at step S160 it is determined that the job for the output of information can be performed by the printer 103, at step S161 it is determined that the received information should be transmitted to the printer 103. At step S162 the printer 104 sends an instruction to the printer 103 to print the information that is to be received (route 3). At step S163 to notify the user that the instructed job. was performed by the printer 103 electronic mail for the user is transmitted to the PC 101 (route 4)."* column 21, lines 7-15; See also (*"First, the process performed by the scanner 102 will be explained. At step S150 the scanner 102 scans a document and acquires a job, information concerning which is to be transmitted to the printer 104. At step S151 this job is entered in the job table, and at step S153 the job is extracted. At step S154, the scanner 102 scans additional data and determines that the data is a job to be transmitted. At step S155, the scanner 102 ascertains that it is operating normally and that no problem exists in the scanning and transmission of instructed information."* column 20, lines 46-52).

Farrell '426 and Trovinger '967 are combinable with Jeyachandran '176 because they are from same field of endeavor of printer systems (*"It is another objective of the present invention to provide a printing apparatus that can perform printing by employing appropriate printing parameters consonant with the processing objective, without a complex operation being required, and a control method therefor."* Jeyachandran '176 at column 2, lines 38-42).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the printer system as taught by Farrell '426 and Trovinger '967 by adding notifying means for calling the user information stored in the second memory means based on the job information read by the reading means and notifying the client of job completion based on the user information as taught by Jeyachandran '176.

The motivation for doing so would have been because it advantageous to provide a printing apparatus that can perform printing by employing appropriate printing parameters consonant with the processing objective, without a complex operation being required (*"It is another objective of the present invention to provide a printing apparatus that can perform printing by employing appropriate printing parameters consonant with the processing objective, without a complex operation being required, and a control method therefor."* Jeyachandran '176 at column 2, lines 38-42).

Therefore, it would have been obvious to combine Farrell '426 and Trovinger '967 with Jeyachandran '176 to obtain the invention as specified in claim 1.

Regarding claim 6; Farrell '426 and Trovinger '967 discloses a where the printing system further includes an on-line scanner, and the print server further comprises: second memory means for storing job information and user information included in the job ticket received by the receiving means; reading means for reading the job information from the data obtained by reading via the scanner the finishing device job ticket printed by the on-line printer (*"Referring now to FIG. 2, the controller section 14 is illustrated by functional interconnected blocks including an image input control computer 22 for receiving an electronic representation*

of an image from the image input source 12. A system controller 24 extracts the desired finishing

instructions for the particular print job from user interface 26. Typically, users enter preferences

such as output media type, orientation, numbers of copies, collation variables, image output

quality, and finishing instructions such as binding options, hole drilling, excess margin

trimming, and the like. Alternately, user preferences could accompany the job data itself from

the image input source 12, for example networked personal computers may be instructed to

supply both job data and user preferences. Artisans will appreciate that the controllers decoding

the user preferences can be embedded within a single machine, for instance as in an integrated

multifunction system; or they can be distributed over a network where, for instance, the input

device is not physically packaged with the printer. Regardless of source however, the system

controller 24 obtains the desired finishing instructions for the particular print job." column 3,

lines 55-67 thru column 4, lines 1-7, See also Fig. 2).

Farrell '426 and Trovinger '967 does not expressly disclose notifying means for calling

the user information stored in the second memory means based on the job information read by

the reading means and notifying the client of job completion based on the user information.

Jeyachandran '176 discloses a notifying means for calling the user information stored in

the second memory means based on the job information read by the reading means and notifying

the client of job completion based on the user information (*"Since, at step S157, the printer 104*

can not execute the job, program control moves to step S160. Then, as at step S160 it is

determined that the job for the output of information can be performed by the printer 103, at step

S161 it is determined that the received information should be transmitted to the printer 103. At

step S162 the printer 104 sends an instruction to the printer 103 to print the information that is

to be received (route 3). At step S163 to notify the user that the instructed job. was performed by

the printer 103 electronic mail for the user is transmitted to the PC 101 (route 4)." column 21,

lines 7-15; See also (*"First, the process performed by the scanner 102 will be explained. At step*

S150 the scanner 102 scans a document and acquires a job, information concerning which is to

be transmitted to the printer 104. At step S151 this job is entered in the job table, and at step

S153 the job is extracted. At step S154, the scanner 102 scans additional data and determines

that the data is a job to be transmitted. At step S155, the scanner 102 ascertains that it is

operating normally and that no problem exists in the scanning and transmission of instructed

information." column 20, lines 46-52).

Farrell '426 and Trovinger '967 are combinable with Jeyachandran '176 because they are

from same field of endeavor of printer systems (*"It is another objective of the present invention*

to provide a printing apparatus that can perform printing by employing appropriate printing

parameters consonant with the processing objective, without a complex operation being

required, and a control method therefor." Jeyachandran '176 at column 2, lines 38-42).

At the time of the invention, it would have been obvious to a person of ordinary skill in

the art to modify the printer system as taught by Farrell '426 and Trovinger '967 by adding

notifying means for calling the user information stored in the second memory means based on

the job information read by the reading means and notifying the client of job completion based

on the user information as taught by Jeyachandran '176.

The motivation for doing so would have been because it advantageous to provide a

printing apparatus that can perform printing by employing appropriate printing parameters

consonant with the processing objective, without a complex operation being required (*"It is*

another objective of the present invention to provide a printing apparatus that can perform

printing by employing appropriate printing parameters consonant with the processing objective,

without a complex operation being required, and a control method therefor." Jeyachandran '176

at column 2, lines 38-42).

Therefore, it would have been obvious to combine Farrell '426 and Trovinger '967 with

Jeyachandran '176 to obtain the invention as specified in claim 4.

Regarding claim 9; Farrell '426 and Trovinger '967 discloses a computer-readable

medium containing a computer program where the printing system further includes an on-line

scanner, and the processing further comprising the steps of: storing job information and user

information included in the received job ticket into second memory means (*"Referring now to*

FIG. 2, the controller section 14 is illustrated by functional interconnected blocks including an

image input control computer 22 for receiving an electronic representation of an image from the

image input source 12. A system controller 24 extracts the desired finishing instructions for the

particular print job from user interface 26. Typically, users enter preferences such as output

media type, orientation, numbers of copies, collation variables, image output quality, and

finishing instructions such as binding options, hole drilling, excess margin trimming, and the

like. Alternately, user preferences could accompany the job data itself from the image input

source 12, for example networked personal computers may be instructed to supply both job data

and user preferences. Artisans will appreciate that the controllers decoding the user preferences

can be embedded within a single machine, for instance as in an integrated multifunction system;

or they can be distributed over a network where, for instance, the input device is not physically

packaged with the printer. Regardless of source however, the system controller 24 obtains the

desired finishing instructions for the particular print job." column 3, lines 55-67 thru column 4,

lines 1-7, See also Fig. 2); reading the job information from the data obtained by reading the

finishing device job ticket printed by the on-line printer (*"The edge sensors 151, 153, FIG. 9 can*

also be used to read bar code indicia that are printed on a job ticket that is passed through the

booklet maker in front of or before the duplex printed sheets that will processed into the booklet.

The job ticket provides job processing instructions in machine readable form to the booklet

maker. These can include the number of sheets, the thickness of the sheets or individual sheets,

the number and position of staples, the final finished size of the booklet, and other information.

The job ticket can originate from any source including the printer that printed the sheets."

column 7, lines 45-55).

Farrell '426 and Trovinger '967 does not expressly disclose calling the user information

stored in the second memory means based on the read job information and notifying the client of

job completion based on the user information.

Jeyachandran '176 discloses a calling the user information stored in the second memory

means based on the read job information and notifying the client of job completion based on the

user information (*"Since, at step S157, the printer 104 can not execute the job, program control*

moves to step S160. Then, as at step S160 it is determined that the job for the output of

information can be performed by the printer 103, at step S161 it is determined that the received

information should be transmitted to the printer 103. At step S162 the printer 104 sends an

instruction to the printer 103 to print the information that is to be received (route 3). At step

S163 to notify the user that the instructed job was performed by the printer 103 electronic mail

for the user is transmitted to the PC 101 (route 4)." column 21, lines 7-15; See also (*"First, the*
process performed by the scanner 102 will be explained. At step S150 the scanner 102 scans a
document and acquires a job, information concerning which is to be transmitted to the printer
104. At step S151 this job is entered in the job table, and at step S153 the job is extracted. At step
S154, the scanner 102 scans additional data and determines that the data is a job to be
transmitted. At step S155, the scanner 102 ascertains that it is operating normally and that no
problem exists in the scanning and transmission of instructed information." column 20, lines 46-
52).

Farrell '426 and Trovinger '967 are combinable with Jeyachandran '176 because they are
from same field of endeavor of printer systems (*"It is another objective of the present invention*
to provide a printing apparatus that can perform printing by employing appropriate printing
parameters consonant with the processing objective, without a complex operation being
required, and a control method therefor." Jeyachandran '176 at column 2, lines 38-42).

At the time of the invention, it would have been obvious to a person of ordinary skill in
the art to modify the printer system as taught by Farrell '426 and Trovinger '967 by adding
calling the user information stored in the second memory means based on the read job
information and notifying the client of job completion based on the user information as taught by
Jeyachandran '176.

The motivation for doing so would have been because it advantageous to provide a
printing apparatus that can perform printing by employing appropriate printing parameters
consonant with the processing objective, without a complex operation being required (*"It is*
another objective of the present invention to provide a printing apparatus that can perform

printing by employing appropriate printing parameters consonant with the processing objective,

without a complex operation being required, and a control method therefor." Jeyachandran '176

at column 2, lines 38-42).

·Therefore, it would have been obvious to combine Farrell '426 and Trovinger '967 with

Jeyachandran '176 to obtain the invention as specified in claim 7.

Regarding claim 12; Farrell '426 and Trovinger '967 discloses a printing system as

claimed in claim 11, further comprising an on-line scanner, and wherein the print server further

includes: a memory for storing job information and user information included in the received job

ticket (*"Referring now to FIG. 2, the controller section 14 is illustrated by functional*

interconnected blocks including an image input control computer 22 for receiving an electronic

representation of an image from the image input source 12. A system controller 24 extracts the

desired finishing instructions for the particular print job from user interface 26. Typically, users

enter preferences such as output media type, orientation, numbers of copies, collation variables,

image output quality, and finishing instructions such as binding options, hole drilling, excess

margin trimming, and the like. Alternately, user preferences could accompany the job data itself

from the image input source 12, for example networked personal computers may be instructed to

supply both job data and user preferences. Artisans will appreciate that the controllers decoding

the user preferences can be embedded within a single machine, for instance as in an integrated

multifunction system; or they can be distributed over a network where, for instance, the input

device is not physically packaged with the printer. Regardless of source however, the system

controller 24 obtains the desired finishing instructions for the particular print job." column 3,

lines 55-67 thru column 4, lines 1-7, See also Fig. 2); and wherein said processor reads job

information input by the scanner from the job ticket printed by the on-line printer, retrieves the

user information stored in said memory based on the job information input by the scanner (*"The*

edge sensors 151, 153, FIG. 9 can also be used to read bar code indicia that are printed on a job

ticket that is passed through the booklet maker in front of or before the duplex printed sheets that

will processed into the booklet. The job ticket provides job processing instructions in machine

readable form to the booklet maker. These can include the number of sheets, the thickness of the

sheets or individual sheets, the number and position of staples, the final finished size of the

booklet, and other information. The job ticket can originate from any source including the

printer that printed the sheets." column 7, lines 45-55).

Farrell '426 and Trovinger '967 does not expressly disclose notifying the client of job

completion based on the user information.

Jeyachandran '176 discloses notifying the client of job completion based on the user

information (*"Since, at step S157, the printer 104 can not execute the job, program control*

moves to step S160. Then, as at step S160 it is determined that the job for the output of

information can be performed by the printer 103, at step S161 it is determined that the received

information should be transmitted to the printer 103. At step S162 the printer 104 sends an

instruction to the printer 103 to print the information that is to be received (route 3). At step

S163 to notify the user that the instructed job. was performed by the printer 103 electronic mail

for the user is transmitted to the PC 101 (route 4)." column 21, lines 7-15; See also (*"First, the*

process performed by the scanner 102 will be explained. At step S150 the scanner 102 scans a

document and acquires a job, information concerning which is to be transmitted to the printer

104. At step S151 this job is entered in the job table, and at step S153 the job is extracted. At step

S154, the scanner 102 scans additional data and determines that the data is a job to be

transmitted. At step S155, the scanner 102 ascertains that it is operating normally and that no

problem exists in the scanning and transmission of instructed information." column 20, lines 46-

52).

Farrell '426 and Trovinger '967 are combinable with Jeyachandran '176 because they are

from same field of endeavor of printer systems (*"It is another objective of the present invention*

to provide a printing apparatus that can perform printing by employing appropriate printing

parameters consonant with the processing objective, without a complex operation being

required, and a control method therefor." Jeyachandran '176 at column 2, lines 38-42).

At the time of the invention, it would have been obvious to a person of ordinary skill in

the art to modify the printer system as taught by Farrell '426 and Trovinger '967 by adding

notifying the client of job completion based on the user information as taught by Jeyachandran

'176.

The motivation for doing so would have been because it advantageous to provide a

printing apparatus that can perform printing by employing appropriate printing parameters

consonant with the processing objective, without a complex operation being required (*"It is*

another objective of the present invention to provide a printing apparatus that can perform

printing by employing appropriate printing parameters consonant with the processing objective,

without a complex operation being required, and a control method therefor." Jeyachandran '176

at column 2, lines 38-42).

Therefore, it would have been obvious to combine Farrell '426 and Trovinger '967 with

Jeyachandran '176 to obtain the invention as specified in claim 10.

Regarding claim 15; Farrell '426 and Trovinger '967 discloses a print server as claimed

in claim 14, wherein the printing system further includes an on-line scanner, and the print server

further comprises: a memory for storing job information and user information included in the

received job ticket (*"Referring now to FIG. 2, the controller section 14 is illustrated by*

functional interconnected blocks including an image input control computer 22 for receiving an

electronic representation of an image from the image input source 12. A system controller 24

extracts the desired finishing instructions for the particular print job from user interface 26.

Typically, users enter preferences such as output media type, orientation, numbers of copies,

collation variables, image output quality, and finishing instructions such as binding options, hole

drilling, excess margin trimming, and the like. Alternately, user preferences could accompany

the job data itself from the image input source 12, for example networked personal computers

may be instructed to supply both job data and user preferences. Artisans will appreciate that the

controllers decoding the user preferences can be embedded within a single machine, for instance

as in an integrated multifunction system; or they can be distributed over a network where, for

instance, the input device is not physically packaged with the printer. Regardless of source

however, the system controller 24 obtains the desired finishing instructions for the particular

print job. " column 3, lines 55-67 thru column 4, lines 1-7, See also Fig. 2); and wherein said

processor reads job information input by the scanner from the job ticket printed by the on-line

printer, retrieves the user information stored in said memory based on the job information input

by the scanner (*"The edge sensors 151, 153, FIG. 9 can also be used to read bar code indicia*

that are printed on a job ticket that is passed through the booklet maker in front of or before the

duplex printed sheets that will processed into the booklet. The job ticket provides job processing

instructions in machine readable form to the booklet maker. These can include the number of

sheets, the thickness of the sheets or individual sheets, the number and position of staples, the

final finished size of the booklet, and other information. The job ticket can originate from any

source including the printer that printed the sheets. " column 7, lines 45-55);

Farrell '426 and Trovinger '967 does not expressly disclose notifying the client of job

completion based on the user information.

Jeyachandran '176 discloses notifying the client of job completion based on the user

information (*"Since, at step S157, the printer 104 can not execute the job, program control*

moves to step S160. Then, as at step S160 it is determined that the job for the output of

information can be performed by the printer 103, at step S161 it is determined that the received

information should be transmitted to the printer 103. At step S162 the printer 104 sends an

instruction to the printer 103 to print the information that is to be received (route 3). At step

S163 to notify the user that the instructed job was performed by the printer 103 electronic mail

for the user is transmitted to the PC 101 (route 4). " column 21, lines 7-15; See also (*"First, the*

process performed by the scanner 102 will be explained. At step S150 the scanner 102 scans a

document and acquires a job, information concerning which is to be transmitted to the printer.

104. At step S151 this job is entered in the job table, and at step S153 the job is extracted. At step

S154, the scanner 102 scans additional data and determines that the data is a job to be

transmitted. At step S155, the scanner 102 ascertains that it is operating normally and that no

problem exists in the scanning and transmission of instructed information." column 20, lines 46-52).

Farrell '426 and Trovinger '967 are combinable with Jeyachandran '176 because they are from same field of endeavor of printer systems (*"It is another objective of the present invention to provide a printing apparatus that can perform printing by employing appropriate printing parameters consonant with the processing objective, without a complex operation being required, and a control method therefor.*" Jeyachandran '176 at column 2, lines 38-42).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the printer system as taught by Farrell '426 and Trovinger '967 by adding notifying the client of job completion based on the user information as taught by Jeyachandran '176.

The motivation for doing so would have been because it advantageous to provide a printing apparatus that can perform printing by employing appropriate printing parameters consonant with the processing objective, without a complex operation being required (*"It is another objective of the present invention to provide a printing apparatus that can perform printing by employing appropriate printing parameters consonant with the processing objective, without a complex operation being required, and a control method therefor.*" Jeyachandran '176 at column 2, lines 38-42).

Therefore, it would have been obvious to combine Farrell '426 and Trovinger '967 with Jeyachandran '176 to obtain the invention as specified in claim 1.

Conclusion

5.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing

date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Marcus T. Riley whose telephone number is 571-270-1581. The

examiner can normally be reached on Monday - Friday, 7:30-5:00, est.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Twyler L. Haskins can be reached on 571-272-7406. The fax phone number for the

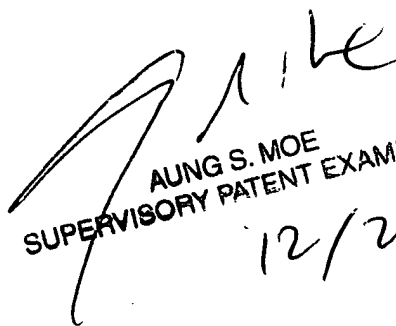organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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12/26/07